total control

Owner's Manual

DMS-AV TSP2000E

Home Theater Amplifier

Control the Experience.

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When discarding the unit, comply with local rules or regulations.
Batteries should ne-hrown away or incinerated but disposed of in accordance with the local regulations concerning battery disposal.
This product and the supplied accessories, excluding the batteries, constitute the applicable product according to the WEEE directive.

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Die Batterien dürfen nicht in den Hausmüll geworfen oder verbrannt werden; bitte entsorgen Sie die Batterien gemäß der örtlichen Vorschriften.
Dieses Produkt und das im Lieferumfang enthaltene Zubehör (mit Ausnahme der Batterien!) entsprechen der WEEE-Direktive.

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Ce produit et les accessoires inclus, à l'exception des piles, sont des produits conformes à la directive DEEE.

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Este producto junto con los accesorios empaquetados es el producto aplicable a la directiva RAEE excepto pilas.

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Volg voor het wegdoen van de speler de voorschriften voor de verwijdering van wit- en bruingoed op.
Batterijen mogen nooit worden weggegooid of verbrand, maar moeten volgens de plaatselijke voorschriften betreffende chemisch afval worden verwijderd.
Op dit product en de meegeleverde accessoires, m.u.v. de batterijen is de richtlijn voor afgedankte elektrische en elektronische apparaten (WEEE) van toepassing.

OBSERVERAANGÅENDE ÅTERVINNING:

Produktens emballage är återvinningsbart och kan återanvändas. Kassera det enligt lokala återvinningsbestämmelser.
När du kasserar enheten ska du göra det i överensstämmelse med lokala regler och bestämmelser.
Batterier får absolut inte kastas i soporna eller brännas. Kassera dem enligt lokala bestämmelser för kemiskt avfall.
Denna apparat och de tillbehör som levereras med den uppfyller gällande WEEE-direktiv, med undantag av batterierna.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Heed all warnings.
3. Follows all instructions
4. Do not use this apparatus near water.
5. Clean only with dry cloth.
6. Do not block any ventilation openings. Install in accordance with the manufacturer`s instructions.
7. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
8. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
9. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
10. Only use attachments/accessories specified by the manufacturer.
11. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, dose not operate normally, or has been dropped.

Cautions on Installation

For proper heat dispersal, do not install this unit in a confined space, such as a bookcase or similar enclosure. More than 0.3m clearance is recommended for the top, while 0.5m is recommended for the sides and bottom of the unit. Do not place any other equipment on this unit.

Safety Precautions

To prevent fire or shock hazard, do not expose this unit to rain or moisture. Care should be taken to prevent objects or liquid from entering the enclosure. Never handle the power cord with wet hands.

WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION:

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

To completely disconnect this product from the main AC power, disconnect the plug from the wall socket outlet. The main plug is used to completely interrupt the power supply to the unit and must be within easy access by the user.

- To prevent the risk of electric shock, do not remove cover. No user-serviceable parts inside. Refer servicing to qualified service personnel.
- These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.
- The ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, tablecloths, curtains, etc.
- No naked flame source, such as lighted candles, should be placed on the unit.
- Observe and follow local regulations regarding battery disposal.
- Do not expose the unit to dripping or splashing fluids, do not place objects filled with liquids, such as vases, on the unit.
- Prevent damage to the power cord. Replace the power cord if it becomes damaged in any way. Always grasp the plug on the power cord when plugging or unplugging the receiver from the AC outlet.
- Your system may produce sound levels capable of causing permanent hearing loss. Do not operate for extended periods of time at high volume levels
- Protect the receiver from impact and place the receiver on a level surface.
- The receiver is equipped with raised feet to provide ventilation, reduce acoustic feedback, and protect against scratching the surface the unit is resting on. URC advises against removing the feet.
- Do not stack anything on top of the receiver (processor, source, etc.) Leave a minimum of 0.3m clearance from above the top of the receiver.
- The receiver should be located away from sources sensitive to heat.
- Do not perform any internal modifications to the receiver.
- Always connect the receiver's power cord to a dedicated AC outlet for normal operation.
- If young children are present, adult supervision should be provided until the children are capable of following all rules for safe operation.
- Mistaking CONTROL OUTPUT or IR INPUT connectors for audio/video inputs or outputs may damage your receiver or other components.

- It is recommended that the system speaker impedance seen by the amplifier channels of the receiver not fall below 4 ohms. Best amplifier thermal stability is achieved when it operates into a 4 ohms or greater speaker load. The nominal impedance of most home speakers range between 6 and 8 ohms.

The receiver should be serviced by qualified personnel when:

A. The receiver is not functioning properly.
B. Objects have entered the chassis.
C. The receiver was exposed to rain or any other type of moisture.
D. The receiver was dropped, or the chassis is damaged.

- Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user`s authority to operate the equipment.

This Class B digital apparatus complies with Canadian ICES-003 Cet apprareil numerique de la Classe B est conforme a la norme NMB-003 du Canada.

Note: The manufacturer is not responsible for any Radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user`s authority to operate the equipment.

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FCC INFORMATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment Off and On, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Product name: Home Theater Amplifier
Model Number: TSP-2000E
Responsible Party Name: UNIVERSAL REMOTE CONTROL, INC.
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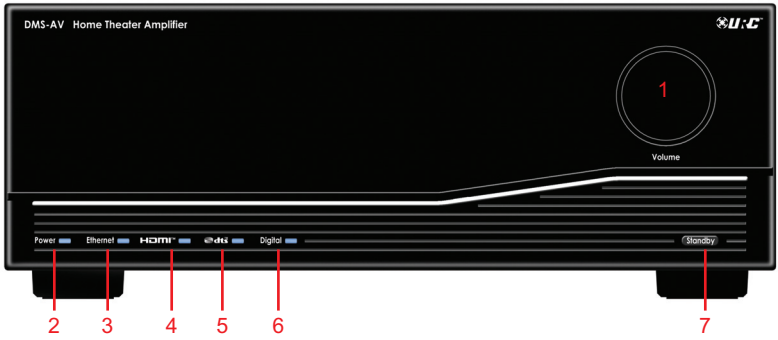
Introduction / Overview

URC's DMS-AV is our new state-of-the-art Network Home Theater Processor which is the centerpiece of your Home Theater System, all based on network technology. It is easy to setup and use, sounds great and delivers crystal clear high-definition video to your home theater. The DMS-AV provides today's cutting edge technologies and performance with sophistication and convenience that is unparalleled in this industry, all at the touch of a button. Dolby Digital, DTS, and URC's proprietary multichannel stereo and surround modes deliver the best audio formats to you with detail, clarity, and tremendous bass and treble response.

URC's DMS-AV performance is based upon combining our in-house design expertise with that of our engineering partners. The DMS-AV has a fully loaded rear panel with 11 discrete audio & video inputs, as well as a Phono Input (MM), including 5 HDMI Inputs and 7 x 125 watt amplifier channels. Combine all these connections with our state-of-the-art technology inside the DMS-AV and you get pristine sound and picture quality unprecedented in the industry.

Cutting edge technologies combined with URC's legendary user interface design, engineering and manufacturing expertise make the DMS-AV the elegant and easy choice for today's demanding home theater installations.

DMS-AV Front Panel



1. **Right Hand Knob -**The right selector knob's primary purpose is audio volume adjustment.

2. **Power LED –** This LED illuminates Blue when the DMS-AV is ON and Red when the DMS-AV is in Standby mode.

3. **Ethernet LED -** The Ethernet LED illuminates STEADY BLUE when successfully connected to an Ethernet network, otherwise when not connected it will BLINK BLUE.

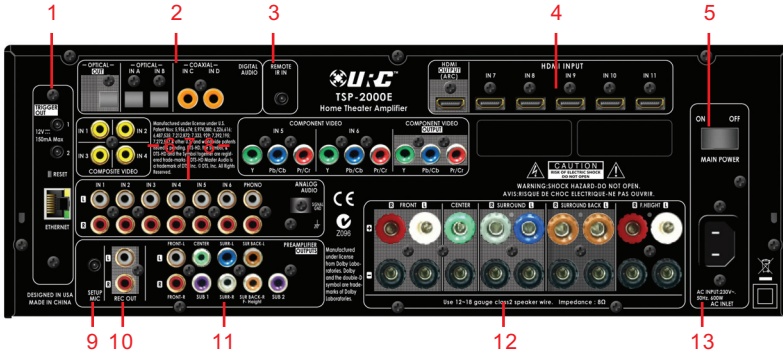
4. **HDMI LED -** The HDMI LED illuminates Blue when the DMS-AV is playing an HDMI source.

5. **DTS-HD LED -** The DTS-HD LED illuminates when the DMS-AV is playing a DTS-HD bitstream.

6. **Digital LED -** The Digital LED illuminates when the DMS-AV is playing a source containing a digital bitstream. This includes any Dolby, DTS or PCM input type, as well as a URC Proprietary Streaming Audio Input.

7. **Standby Button –** Pressing this button toggles the state of Standby mode. Pressing and holding this button causes the DMS-AV to reboot.

DMS-AV Rear Panel



1. Voltage Triggers, Reset Switch and Ethernet - The two 12 volt triggers present at this section of the back panel supply a maximum current of 100 mA, and can be used to trigger an external amplifier, or can also beused to trigger the use of an anamorphic lens on a projector. These jacks are both 3.5 mm mono style female mini jacks. The pin is positive(+), and the sleeve is ground.

Each of the 12V DC triggers may be set to 12V DC when a particular input is selected. For example, Trigger #1 may be set to output 12V DC when Input 8 is selected. When another input besides Input 8 is selected, Trigger #1 will go to 0V DC.

The Ethernet port is a 10/100 Base Ethernet port, that allows receiving and sending multicast audio streams when used with a DMS/SNP URC Multi zone system, and also used for command and control when used with an MRX-10/MRX-12 (or similar) URC Advanced System Controller.

Pressing the RESET button will return the DMS-AV to its factory default state.

2. Optical and Coaxial Digital S/PDIF Inputs/Output - By default, the optical and coaxial S/PDIF audio inputs are not assigned to any composite, component or HDMI video input. The optical and coaxial S/PDIF inputs require assignment to a video input (via the on-screen display, or the URC Accelerator PC application).

Any of the optical/coaxial S/PDIF inputs can be assigned to any numbered video input (Composite, Component or HDMI). The optical/coaxial S/PDIF inputs cannot be assigned to Input Phono or Input Multi Cast Stream, since those inputs are “Audio Only” inputs.

The optical digital output shall provide a S/PDIF digital output of any selected optical input signal. This digital output is for use with a digital recording device.

3. Remote Infrared Input - The Infrared Input port allows for easy integration with an RF(radio frequency) to IR (infrared) style base station, such as the URC MRF-350 or MRF-260. This port provides the ability to perform simple one-way control of the DMS-AV with a URC legacy-style infrared remote control, such as a MX-900, MX-980 or MX-880, among others. Use of this port with RF based remote controls allows for "stand alone" operation of the DMS-AV, that is, use of the DMS-AV without an MRX-10/MRX-12 or similar external URC Advanced System Controller. This is a 3.5 mm mono style female mini jack input, with the tip being positive(+), and the sleeve being ground.

4. HDMI Inputs/Output - The DMS-AV supports six HDMI connections; five are used for signal input, while one supports HDMI signal output.

The DMS-AV supports a single HDMI video output. All video signals sent to the DMS-AV via composite, component, HDMI, or generated by the internal on-screen display output via the HDMI OUT connector.

The HDMI Technology within the DMS-AV supports all versions of HDMI, which means it is compatible with the following formats:

sRGB
YCbCr
Blu-ray Disc and HD DVD Video and Audio at Full Resolutionn
Consumer Electronic Control (CEC)
Deep Color
xvYCC
Auto Lip-Sync
Dolby TrueHD Bitstream Capable
DTS-HD Master Audio Bitstream Capable
Audio Return Channel
3D over HDMI

5. Main AC Rocker Style Switch - Provided is a Main AC Rocker Switch. This switch is sometimes known as a "Vacation" switch, and is used to remove main AC from the DMS-AV, or perform a hard reboot of the unit.

6. Composite Video Inputs - The DMS-AV supports four composite video RCA connectors. All video present at these connectors is upconverted to the HDMI Video Output.

7. Analog Audio Inputs - The DMS-AV provides seven total analog audio inputs. Six of these inputs support a line-level analog audio signal. One of these inputs will support a phono level analog audio signal. The Phono Input supports the MM (Moving Magnet) phono input type. The Phono Input also provides a ground lug connector on the DMS-AV back panel.

8. Component Video Inputs/Output - The DMS-AV has three component video connections. Two of these connections are inputs, while the third connection acts as a video output (in case HDMI is not used).

The component video inputs accept a maximum input resolution of 1080i/60Hz.

The component video output supports a maximum output resolution of 1080i/60Hz. Composite and HDMI video are not converted and will not output via the component video. The on-screen display is not viewable via the component video output as it only works with HDMI.

9. Setup Microphone Input - This jack allows the connection of an external microphone for automated setup of the DMS-AV speakers, in regards to crossovers, audio levels, and equalization. This is a 3.5 mm mono style female mini jack, tip being positive(+), and sleeve being ground. A setup microphone is provided.

10. Record Output – This output is an analog left/right line level signal of the currently selected analog audio input. Only analog audio input signals are output via this connection. Volume control settings do not effect the record output. This stereo pair of analog RCA outputs are for use with an analog recording device.

11. Preamplifier Outputs – The DMS-AV supports nine preamplifier audio outputs. In addition to the standard "7.1" audio outputs, including front, center, surround and subwoofer channels, the DMS-AV shall also support a second subwoofer output channel. These surround outputs are designed for driving external power amplifiers or powered speakers.

12. Speaker Outputs - The DMS-AV provides seven amplifier channels for surround sound reproduction, rated at 125 watts per channel into an 8 ohm speaker load

Within the on-screen display or the URC Accelerator Application, set your DMS-AV to use "Surround Back" amplifier channels or "Front Height" amplifier channels. Surround back speakers and front height speakers cannot be powered simultaneously.

The output connectors are industry standard high-current binding posts. Bare speaker wire may be secured within the screw-type binding posts, or banana plugs may be inserted into the center of the binding posts.

The processed audio present at the binding post connectors (speaker connections) contains the same processing as the audio present at the pre-amplifier stage. As an example, if a crossover is applied to the front left and right preamplifier channels, the same crossover settings are applied to the front left and right speaker outputs, only amplified.

13. AC Receptacle - For attaching the supplied high current AC power cord to the unit.

Quick Start Considerations

Your URC receiver is pre-programmed for ease of operation, right out of the box. In general, there is minimal setup required to start using your new DMS-AV Network Home Theater Processor.

To quickly setup and begin operating your receiver, follow these steps:

1. Start with all AC power cords unplugged from their designated AC outlet.

2. From each source device, connect the A/V cables which could include composite, component, or HDMI cables.

3. Connect the speaker cables from the receiver's speaker outputs to the appropriate speakers.

4. Connect the appropriate video cables from the receiver's video outputs to the video monitor's input(s).

5. Connect an Ethernet cable from the DMS-AV to local network router.

6. Plug the AC power cords for the DMS-AV and all connected sources into their designated AC outlets.

7. Power On the DMS-AV. Bring the DMS-AV out of "standby" mode, via the front panel "standby" button.

8. Power On all source components.

9. On a computer connected to the same network as the DMS-AV, launch the DMS System Toolbox application.

10. In the unit discovery window, select the Network Scan button. Select the DMS-AV Home Theater Amplifier.

11. In the DMS System Toolbox application, select any of the connected source components. Verify proper operation of the DMS-AV and the source components.

The rest of this manual will give further insight into the many aspects of your new receiver. Some additional installation considerations should be noted as follows:

- It is important that your electronic equipment be located where there is proper ventilation. Failure to ventilate your receiver could result in erratic operation and possible failure caused by overheating. A minimum of 0.3m should be maintained above the receiver. Do not place items directly on top of the receiver. Do not place flammable items on, around or near the A/V equipment (curtains, paper, etc.).

- URC provides a software program, URC Accelerator, that aids in the setup process of the DMS-AV. Contact your URC Representative to acquire this PC Application. URC Accelerator is easy to use and is intended to simplify the setup process of your new URC Network Home Theater Processor and all user interfaces.

- Configure a system diagram of all components that are to be connected into the system. The receiver has a total of eleven Audio and Video inputs, and 1 Phono input. The back panel is labeled **IN 1, IN 2, IN 3, IN 4, IN 5, IN 6, Phono, IN 7, IN 8, IN 9, IN 10, IN 11** for component video /analog audio sources, Phono for the phono source, and HDMI sources.

The optical digital and coax digital inputs are labeled **IN A, IN B, IN C** and **IN D** respectively, and can be assigned to any of the composite, component and HDMI Video inputs. By default, the optical and coax digital inputs are not assigned to any video input. Use the on-screen display or the URC Accelerator application to assign an optical or coax digital input to any video input.

The source names by default are set to **IN 1, IN 2, IN 3** etc...The inputs may be renamed in the on-screen display, or in the URC Accelerator application to reflect the desired source name. For example, the name **IN 9** may be changed to “Blu-Ray. The renamed source input name will appear on the DMS-AV’s OSD (on-screen display).

- Determine the type of cable that is needed for each connection. Keep in mind that the quality of the cabling that is used may make a difference in the overall audio and video quality. Try to keep interconnecting cable runs as short as possible. When routing cables between equipment, be sure to keep AC cables separate from audio cables. It is a good idea to bundle like cables together to keep interference (noise) to a minimum.

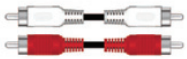
- It is a good idea to label each cable with a name or number at both ends, when allocating each cable. Have all the cables you need before you begin the installation because it is inconvenient to run to the store when you are excited to hear what the system will sound like.

- Plan enough cable length and space to allow future access to the back panel.

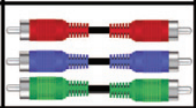
- For best performance it is recommended that a dedicated AC power line or supply be used. If the equipment is installed in a rack, be sure to insulate the equipment from the rack itself.

Connection Overview

Audio Connections

Cable		Jack	Description
HDMI			HDMI Connections can carry uncompressed standard or High Definition digital video and audio. It offers the best picture and sound quality.
Optical Digital Audio			This offers the best sound quality and allows a Dolby Digital and DTS signal to be sent. The audio quality is the same as for coaxial.
Coaxial Digital Audio			This offers the best sound quality and allows a Dolby digital and DTS signal to be sent. The audio quality is the same as for optical. The “orange” RCA connector represents the digital coax connection.
Analog Audio			This cable carries analog audio. It is the most common connection format for analog audio and can be found on almost all AV components, The “white” RCA connector represents the left analog audio input and the “red” is the right.

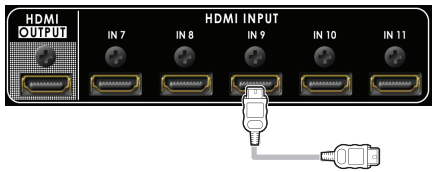
Video Connections

Cable		Jack	Description
HDMI			HDMI is an audio and video interface that carries an uncompressed digital bitstream. It can also carry HD video and up to 8 channels of uncompressed audio.
Component			Component video is analog video information that is separated into three different signals.
Composite			Composite video is the standard for color video. It combines the luminance (brightness or black-and-white) and chrominace (color) information onto a single conductor.

Video Inputs - Hardware Connections

Video Input Connection – HDMI

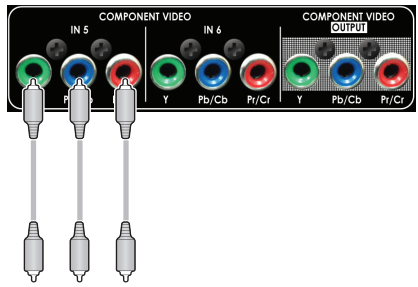
The URC surround processor provides 5 HDMI A/V inputs. While HDMI carries both audio and video, URC allows options to process audio and video separately (please see the menu setup for further options). To connect an HDMI video source to the URC DMS AV, connect the HDMI cable to the HDMI output on the source. Then connect the other end of the cable into the corresponding HDMI input on the processor. Shown below is an HDMI output on the source going into **IN 9** on the DMS-AV.



HDMI connection to HDMI source

Video Input Connection - Component Video

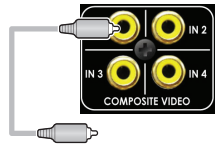
The DMS-AV provides two sets of component video inputs. Each component inputcorresponds to a set of stereo analoginputs, labeled with the same input number. Optical digital inputs and coax digital inputs are available to be assignedto either of the component video inputs. For example, component video **IN 5** could have it's audio reassigned to optical digital **IN A**. Shown is a component video source connected to **IN 5** on the DMS-AV.



Component connection to video source output

Video Input Connection - Composite Video

The DMS-AV provides four composite video inputs. Each composite input corresponds to a set of stereo analog inputs, labeled with the same input number. These inputs may be used to up-convert a composite video signal to the HDMI output. Connect the composite video output on the source using an RCA cable to the yellow colored input on the DMS-AV. Shown below is a composite video source with an RCA connection going into the yellow RCA input of **IN 1**.

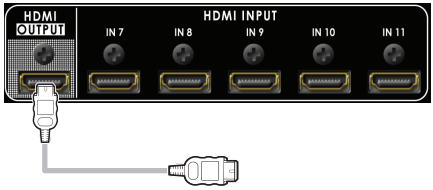


Composite connection to video source

Video Outputs - Hardware Connections

Video Output Connection - HDMI

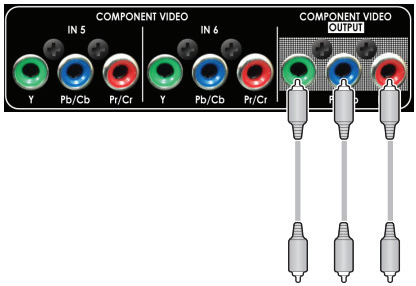
The HDMI output connection on the receiver carries high-definition video to your television or monitor. To connect an HDMI video output from the DMS-AV, connect the HDMI cable to the HDMI output on the DMS-AV. Then connect the other end of the cable into the corresponding HDMI input on your television or monitor. Shown below is the HDMI output on the DMS-AV going to the HDMI input on a monitor.



HDMI input connection to monitor

Video Output Connection - Component Video

The component video output connection on the receiver carries high-definition or standard definition component video to your television or monitor. HDMI video and composite video are not routed to the component video output of the DMS-AV. On-screen display is not viewable from the component video output of the DMS-AV. To connect a component video output from the DMS-AV, connect the three RCA component video cables to the corresponding component video outputs on the DMS-AV. Then connect the other ends of the cables into the corresponding component video inputs on your television or monitor. Shown below is the component video output on the DMS-AV going to the component video input on a monitor.



Component output connection to input of monitor

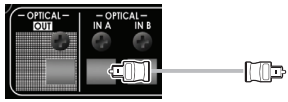
Audio Inputs - Hardware Connections

Audio Input Connection – HDMI

Although an HDMI connection carries both audio and video, the DMS-AV can process audio and video separately (please see the menu structure for further information). To connect an HDMI audio source to the DMS-AV, connect the HDMI cable to the HDMI output on the source. Then connect the other end of the cable into the corresponding HDMI input on the DMS-AV.

Audio Input Connection - Optical Digital

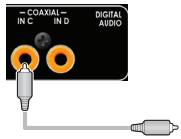
The DMS-AV provides two optical digital audio inputs. These inputs may be used to receive an optical digital audio signal from a source connected to the DMS-AV. Connect the optical digital audio output on the source using an optical cable to the desired optical digital audio input on the DMS-AV. Shown is an optical digital audio source connected to the optical digital audio **IN A**.



Connection to optical digital audio source

Audio Input Connection - Coax Digital

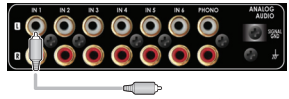
The DMS-AV provides two coaxial digital audio inputs. These inputs may be used to receive an coaxial digital audio signal from a source connected to the DMS-AV. Connect the coaxial digital audio output on the source using a coax cable to the desired coaxial digital audio input on the DMS-AV. Shown below is a coaxial digital audio source connected to the coaxial digital audio **IN C**.



Connection to coaxial digital audio source

Audio Input Connection - Stereo Analog

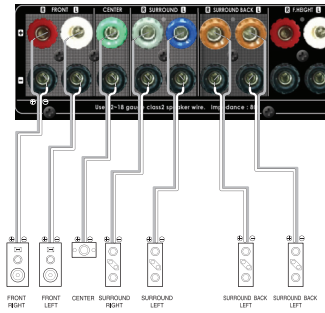
The DMS-AV provides seven pairs of stereo analog audio inputs. Six pairs of analog inputs accept a line level audio signal. One pair of analog inputs accepts a phono (MM) level audio input. A ground lug for the phono input is also provided. Any of these seven inputs may be set to become a network multicast "streaming" source, that can be shared with any URC DMS Amplifier. The DMS-AV can create a maximum of two multicast streams. These inputs may be used to receive a stereo analog audio signal from a source to the DMS-AV. Connect the stereo analog audio output on the source using a RCA cable to the analog stereo audio input on the URC. Shown is a stereo analog audio source going into the stereo analog audio inputt **IN 1**.



Connection to analog signal source

Audio Output - Hardware Connections

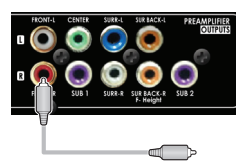
Your DMS-AV receiver has both unbalanced line level RCA surround output (for use with other external amplifiers) and speaker binding posts (for use with the 125 watt internal amplifiers). These will connect directly to a speaker or an amplifier. When connecting audio cables to the amplifier, be sure to match the labeled output channels to the position of the speaker in the room.



Speaker outputs connection to speakers

Audio Output Connection – Unbalanced

The DMS-AV supports 7.1 RCA surround outputs. The preamplifier outputs can be configured to use either Surround Back speakers or Front Height speakers. Typical usage of these outputs is for use with other external amplifiers. These outputs may be used to connect external amplifiers and/or subwoofer(s) to the DMS-AV. Be sure to match the appropriate preamp output to the speakers location in the room. For example, connect the Center Channel output to the center speaker amplifier channel. For use in a five channel audio system, do not connect the Surround Back or Front Height audio channels. For use in a six channel audio system, connect the sixth channel to the Surround Back Left channel. Shown are the DMS-AV unbalanced outputs connected using standard RCA cables to the unbalanced inputs on an external amplifier. The Subwoofer output is used as a line source to a powered subwoofer.



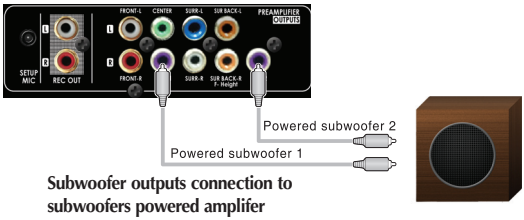
Analog audio unbalanced signal outputs connection to amplifier

Audio Output Connection – Speakers

The DMS-AV powers seven discrete speaker channels. Be sure to match the appropriate speaker output to the speakers location in the room. For example, connect the Center Channel output the center speaker amplifier channel. If a five channel audio system is desired, do not connect the Surround Back audio channels. If a six channel audio system is desired, connect the sixth channel to the Surround Back Left channel.

Audio Output Connection – Subwoofer(s)

The DMS-AV supplies two subwoofer (.2) outputs. Connect the subwoofer output(s) to the input on the subwoofer(s). The diagram shows how the receiver may be connected to active subwoofer(s).



Subwoofer outputs connection to subwoofers powered amplifer

Audio Output Connection - Optical Digital Record

The optical digital output will output the S/PDIF optical digital signal of the source selected on the receiver. If you wish to record both analog and digital sources you must connect both analog and digital outputs to your recorder. The DMS-AV does not convert digital audio to analog audio nor does it convert analog audio digital audio.

Audio Output Connection - Analog Record

A stereo pair of analog RCA outputs for use with an analog recording device. If you wish to record both analog and digital sources you must connect bot hanalog and digital outputs to your recorder. The DMS-AV does not convert digital audio signals to analog audio recording signals, and does not convert analog audio signals to digital audio recording signals. The DMS-AV does not convert digital audio to analog audio nor does it convert analog audio digital audio.

Configuration and Control - Hardware Connections

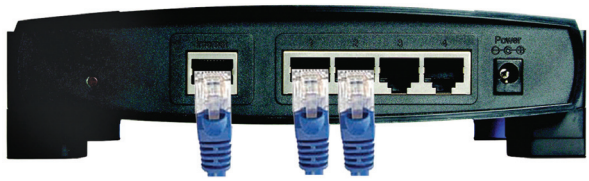
Ethernet Communication - Connection Instructions

1. Make sure that all devices are powered Off, including the DMS-AV, PCs, routers, switches, etc.

2. Connect one end of an Ethernet network cable to one of the numbered ports on the back of the router. Connect the other end to the Ethernet port in the rear of the DMS-AV. Repeat this step to connect more PCs or other network devices that require a wired connection to the router. Power the router as needed.

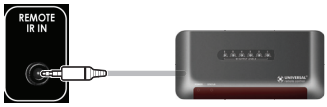
3. Connect your cable or DSL modem's Ethernet cable to the router's Internet port. Power On the cable or DSL modem, DMS-AV, router, etc.

4. Power On your PC(s).



Infrared Input

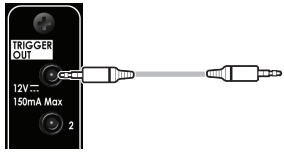
The DMS-AV allows for basic infrared control via the IR Input port. Connect an Infrared receiver, such as a URC MRF-350 IR/RF Base Station to the infrared input port on the back of the DMS-AV. The DMS-AV does not support a built-in front panel infrared receiver. All connections are 3.5mm (mono mini) jack, with the tip positive(+), and the sleeve being ground.



MRF-350 RF Base Station to DMS-AV IR Input

Control Output Triggers / Amp Enable

The Control Out / Amp Enable outputs are standard 3.5 mm (mono mini) jack connections used for triggering such pieces as amplifiers, screens, relays, etc. The output is a 100 mA 12 VDC signal. The voltage trigger outputs are active when the DMS-AV is selected to a specific input. The trigger input for each control output is set in the on-screen display, or within the URC Accelerator application. Shown below is control Trigger 1 and Trigger 2 connection to the trigger input on an amplifier.



Control output 1 connection to an amplifier

Reset

Pressing the Reset button will return the DMS-AV to its factory default state.

Video Processing

Detail Enhancement

Detail enhancement brings out the fine detail in scenes and is important for SD and HD material. For example, it's possible to see blades of grass, small details on jackets, and wrinkles on faces. When combined with Noise Reduction and Advanced Scaling, DMS-AV Detail Enhancement can make regular DVDs approach the quality of high-definition DVDs.

Mosquito Noise Reduction

Satellite and cable providers, as well as DVR recorders, compress the video signal to get the maximum content into the smallest space. The DMS-AV delivers high-quality Mosquito Noise Reduction to remove the noise and artifacts caused by this compression.

Edge Enhancement

Edge Enhancement brings out the fine detail in the edges of objects, and is important for SD and HD material. When combined with Noise Reduction and Advanced Scaling, DMS-AV Edge Enhancement can make regular DVDs approach the quality of high definition DVDs.

HDMI Audio Output

The HDMI output of the DMS-AV has the ability send the processed audio to the display monitor, bypassing the preamp section and speaker outputs. In the HDMI Setup menu within the on-screen display and the URC Accelerator application, set the HDMI Audio Output to "Passthrough" to enable this option.

CEC Control

The DMS-AV has the ability to execute Consumer Electronics Control (CEC) to a monitor or projector that is connected by HDMI, and is CEC Capable. Consumer Electronics Control (CEC) is a feature designed to allow the user to command and control two or more CEC-enabled boxes, that are connected through HDMI, by using only one of their remote controls. (i.e. controlling a television set, set-top box and DVD player using only the remote control of the TV). CEC also allows for individual CEC-enabled devices to command and control each other without user intervention.

CEC options for the DMS-AV are the following:

- On (Power On)
- On (Always)
- Off

The default CEC setting for the DMS-AV is Off.

Consult your individual display monitor or projector manual for specific information regarding their CEC compatibility.

Auto A/V Sync

This feature monitors an incoming HDMI bitstream, and uses information within the bit stream to automatically correct any audio and video syncing issues. By default, this option is set to Off.

Video PReP®

Progressive Re-Processing (PReP®) is the industry's first technology designed specifically to improve progressive video signals by removing the artifacts causedby inferior interlaced-to-progressive conversion. Video signals that originate inthe interlaced format used by most broadcasters often suffer degradation whenthe signal is converted to the progressive format required by digital displays. Ifthis process is not done well, it results in artifacts which will be amplified duringscaling or other processing such as detail enhancement. The patent-pending PReP technology addresses this problem be reverting the progressive video signal to its original interlaced format so that it can be reconverted to progressiveusing a higher-quality deinterlacer.

The DMS-AV has two available options for PReP – Auto and Off. By default, PReP is set to Off. This value can be set in the on-screen menu or the URC Accelerator Application, in the Video Adjust section.

Video Test Patterns

The DMS-AV firmware includes eight video test patterns used to calibrate a video display device. Typically, an external video test pattern generator is required for professional display device setup. The DMS-AV provides access to these patterns within the on-screen display, and also accessible via the URC Accelerator Application.

The video test patterns available are:

Frame Geometry
'Frame/Geometry' test pattern is used to verify that the image is positioned correctly on your display.

Bright/Contrast
The 'Brightness/Contrast' test pattern will assist you in setting up both the brightness (black level) and contrast (white level) of your display. The 'Brightness/Contrast' test pattern is composed of 4 quarter-screen blocks. Two of the blocks have a background level of standard black and the other two blocks have a background level of standard white.

Embedded in the black blocks are 3 bars. One is 4 IRE below black (blacker-than-black), one is 1 IRE above black, and the third is 2 IRE above black. Embedded in the white blocks are 3 bars. One is 1 IRE above white (whiter-then-white), one is 1 IRE below white, and the third is 2 IRE below white. The bottom two blocks differ slightly from these levels. For the bottom two blocks, the blacker-than-black is at the lowest possible luma level and the whiter-than-white bar is at the highest possible luma level.

When the brightness and contrast are adjusted correctly, you should be able to see the 1 IRE and 2 IRE above black bars on the black background and the 1 IRE and 2 IRE below white bars should be visible on the white background. When the brightness is adjusted correctly, black objects should appear 'black' with the details still intact and lighter areas should be 'light', not gray, with the details still intact. When the contrast is adjusted correctly, white objects will appear 'white' with the details still intact. Because the contrast settings can affect brightness settings we recommend that you check the brightness setting after making this adjustment.

Checker board

When the Checkerboard test pattern is displayed correctly, close up you should be able to see a 1- pixel checkerboard and at proper viewing distance the image should appear as an even gray. If your display is CRT-based you will not see this checkerboard, but your screen should be an even gray. When this test pattern is displayed incorrectly, the resulting image does not look like a fine checkerboard and may have irregular patterns. If this is the case then the chosen output resolution may not be the native resolution of your display or your display may scale all input signals even if the input resolution is already at native resolution. Check to make sure that the output resolution selected on the DMS-AV is the correct output resolution for your display.

Vertical Lines

The 'Vertical Lines' test pattern should appear as one pixel wide black and white columns. If you see any irregular pattern(s) in the image then you know that the display is scaling the signal horizontally.

Horizontal Lines

The 'Horizontal Lines' test pattern should appear as one pixel tall black and white rows. If you see any irregular pattern(s) in the image then you know that the display is scaling the signal vertically.

Judder

The 'Judder' test pattern displays a bar that bounces back and forth at the chosen output resolution. When this test pattern is displayed correctly, the bar will move smoothly across the screen and bounce from side to side. When this pattern is displayed incorrectly, this bar may 'tear' as it moves across the screen.

Color 8 Bars 75
In this SMPTE color bar image, the displayed pattern contains eight vertical bars of 75% intensity.

Color 8 Bars 100
In this SMPTE color bar image, the displayed pattern contains eight vertical bars of 100% intensity.

OSD Transparency

The on-screen display transparency can be set to Low, Medium or High. The default value for the DMS-AV is Low. This value can be set in the on-screen display, or the URC Accelerator Application.

Audio Modes and Speaker Selections

The DMS-AV incorporates a state-of-the-art software and hardware system that allows the end-user to select the appropriate number of speakers, two-channel surround decoder (Dolby Pro Logic IIx, Dolby Pro Logic IIz or DTS NEO:6) or multi-channel surround mode (Movie or Music) depending on the user's preference. Multi-channel encoded bit streams (DTS and Dolby Digital) are automatically detected and selected for any digital input.

Audio/Surround Mode Usage

Custom Audio/Surround modes are available for selection with the DMS-AV. These audio modes are selectable by pressing the Surround Up or Surround Down button on the remote control:

Theater
Movie
Hall
Game
Stadium
Multi Channel Stereo F.S.S. (Front Stage Surround Effectiveness)
A.L.C. (Auto Volume Level control)

On Screen Display (OSD) Format

The DMS-AV on-screen Display allows for the complete system setup of the DMS-AV, when using in an application that does not include a URC DMS Multi Zone Audio System.

Momentary OSD

On-screen display information, such as volume level and input name can be disabled, if desired. Within the System Setup section of the on-screen display, or within the URC Accelerator PC Application, set this feature to “Off”, if desired.

Software Setup - URC Accelerator

URC Accelerator is the advanced PC application used to configure the DMS-AV, the appropriate user interface remote control, and integration with URC DMS Multi Zone amplifiers. Contact your URC representative to acquire the URC Accelerator PC Application.

DMS-AV System Settings – Audio

Speaker Size/Speaker Crossover

Speaker size refers to the frequency range a speaker can handle. Audio material, particularly Dolby Digital and DTS movies, often contain large amounts of bass. If this bass information is sent to small speakers that are incapable of reproducing bass, then this information will be lost or distorted. Too much bass may damage small speakers. By configuring the DMS-AV for the correct type of speaker crossover, all bass information will be appropriately routed to the speakers that are best able to reproduce it correctly.

Typically bookshelf or satellite speakers are considered Small. Smaller floor standing speakers with a single 8” or less woofer should also be considered Small. Floor standing speakers with 10” or larger woofers, or multiple smaller woofers may be considered Large. These are general guidelines only if you are unsure, please consult your speaker manufacturer or dealer.

If using large speakers, the system may not require a subwoofer, however better results may still be obtained with the use of a subwoofer. Even with speakers that are capable of reproducing deep bass, better overall bass response may be obtained by setting a crossover frequency for these speakers. This allows bass to be reproducedfrom a single point (the subwoofer), and avoids the possibility of phase cancellationwhich may occur when bass is reproduced from multiple speakers simultaneously.

Front Speakers

There must be at least 2 front speakers in order to use the DMS-AV. Set the crossover frequency of the front speakers in the on-screen display or the URC Accelerator Application, based on the guidelines described above.

Center Speaker

It is not necessary to have a center speaker. Set the Center Speaker Option in the on-screen display to Yes or No, or set this in the URC Accelerator Application, based on the center channel availability. If set to NO the center information will be reproduced in the front left and front right speakers. No audio information is lost, however the sense of voices coming from the screen may be lost. Set the crossover frequency of the center speaker in the on-screen display or the URC Accelerator Application, based on the guidelines described above.

Surround Speakers

It is not necessary to have surround speakers. Set the Surround Speaker Option in the on-screen display to Yes or No, or set this in the URC Accelerator Application, based on the surround channels availability. If Surround Speaker Option is set to NO, the surround information will be reproduced in the front left and right speakers. No information is lost but the sense of spaciousness provided by discrete 5.1 channel sound tracks or 2 channel tracks enhanced by Dolby Pro Logic IIx or DTS Neo:6 may be lost. If surround speakers are set to No, surround back speakers are not available.

Surround Back Speakers

It is not necessary to have surround back speakers. Set the Surround Speaker Option in the on-screen display to Yes or No, or set this in the URC Accelerator Application, based on the surround channels availability. If the surround speakers are set to none, no options will appear for the surround back speakers. There is the option to use 1 or 2 back speakers. If set to none, the back information will be reproduced in the surround speakers and although no information is lost, the sense of sounds coming from directly behind you may be lost. If surround back speakers are used, front height speakers are not available.

Front Height Speakers

It is not necessary to have front height speakers. Set the Front Height Option in the on-screen display to Yes or No, or set this in the URC Accelerator, based on the surround channels availability. If set to none, the front height speaker information will be reproduced in the front speakers and although no information is lost, the sense of sounds coming from directly above you may be lost. If front height speakers are used, surround back speakers are not available.

Subwoofer(s)

There are four choices for subwoofer. If set to No, all bass information, including LFE (.1 channel) will be routed to any speakers that are configured to pass low frequency information, as described in the setup above. If the individual speaker crossovers are not set to pass low frequency information, and no subwoofers are used in the system, the low frequency information shall be lost.

The most common setting for subwoofer is Preout 1/2, which allows for connections of two subwoofers, taking advantage of the DMS-AV's ability to reproduce low frequency information through two subwoofers (.2).

Setting the Subwoofer to Preout 1 shall configure the DMS-AV to send low frequency information from its Sub 1 preamplifier output only.

Setting the Subwoofer to Preout 2 shall configure the DMS-AV to send low frequency information from its Sub 2 preamplifier output only.

Speaker Distance

Ideally the speakers should be positioned at an equal distance from the listening position. However, physical limitations usually require placing the speakers in other than optimum locations. The DMS-AV contains a means to electronically move each speaker's location. This allows for superior reproduction of the directional cues available during movie or music playback. Measure the distance in feet from your listening position to each speaker. Enter this information into DMS-AV's on-screen display, or into the URC Accelerator Application. Default measurement units are feet, but units may be changed to meters if preferred.

Channel Level

Channel level calibration will allow the equalization of the volume levels of each speaker to make up for differences in speaker characteristics and distances from the listener to the speakers. Best results will be achieved using a Sound Pressure Level (SPL) meter, and an external analog tone or pink noise generator. Set the SPL Meter to C Weighting and Slow Response. Place the meter at your listening position and adjust each speaker for an equal response (An SPL of 75 dB is recommended).

Speaker Crossover (X-Over)

This sets the frequency at which bass tones are filtered from the speaker channel selected and sent to the subwoofer(s). The crossover point is the frequency at which the amount of information in the subwoofer and main speaker(s) is equal. Set this according to the capabilities of the speakers and/or subwoofer(s). When a crossover frequency for a speaker is set, the crossover frequency and above is sent to the affected speaker, while the crossover frequency and below is sent to the subwoofer(s).

Each speaker in the system (except for the subwoofer) has a specific crossover assigned to it. Each speaker has the ability to have a unique crossover frequency set for it. While the subwoofer does not have its own unique crossover, the subwoofer low frequency content is determined by the crossover settings of all other speakers in the system. All low frequency material below the crossover frequency set point for each speaker is sent to the subwoofer(s).

LFE (Dolby/DTS)

This setting is used to increase or decrease the subwoofer level for multichannel bitstreams that contain an Low Frequency Effects channel. The subwoofer signal may need to be increased or decreased depending on the room or installation. Usually this will be set to 0 dB (default). Note that this effects only the separate LFE (.1) or subwoofer channel available on source material. There is no effect on the reproduction of normal bass from the front, center, or surround channels.

Height Gain

The Height Gain applies to the Front Height speakers. This option is available when the DMS-AV is set to use Front Height speakers. Three options are available for this setting: Low, Mid and High. The default value for this
parameter within the DMS-AV is “Mid”. Change this value within the on-screen display, or in URC Accelerator under the sound adjust section.

Dolby Pro Logic II Music Setup

Three unique parameters are available to “shape” the sound of sources played through the Dolby Pro Logic II Music mode. The parameters available are:

Panorama
Panorama wraps the sound from the front left and right speakers around you, sending an image to the surround speakers for an exciting perspective.

Center Width
Center width lets you gradually spread the center-channel sound into the front left and right speakers. At its widest setting, all the sound from the center is mixed into the left and right speakers.

Dimension
Dimension control adjusts the front/surround balance to suit your listening preference.

Night Mode

When the Night Mode option is enabled the sound level of compatible digital audio soundtracks will be dynamically compressed. Dynamic range compression increases low-level audio content such as dialog, making it easier to hear at low volume levels while at the same time reducing the intensity of higher-level audio content.

Dynamic range control (Night Mode) enables you to customize audio playback to reduce peak volume levels (no loud surprises) while experiencing all the details in the soundtrack, enabling late-night viewing of high-energy surround sound without disturbing others.

Available options for night mode are: Auto, Off, Low, Medium and High, depending on the incoming bitstream type. Adjust this parameter in the Sound Adjust section of the on-screen display, or the URC Accelerator Application.

Surround modes

DTS Surround
DTS Surround (also called simply DTS) supports up to 5.1 discrete channels and uses less compression for high fidelity reproduction. Use it with DVDs and CDs bearing the DTS logo.

DTS-ES™ Discrete 6.1
This is a 6.1 channel discrete digital audio format adding a surround back channel to the DTS digital surround sound. The seven totally separate audio channels provide better spatial imaging and 360 degrees sound localization, perfect for sounds that pan across the surround channels. Use it with DVDs bearing the DTS-ES logo, especially those with a DTS ES Discrete sound track.

DTS-ES™ Matrix 6.1
This is a 6.1 channel discrete digital audio format inserting a surround back channel to the DTS digital surround sound through matrix encoding. Use it with DVDs bearing the DTS-ES logo.

DTS-Neo: 6™ Surround
DTS Neo: 6 is a matrix decoding technology for achieving 7.1 channel surround playback with 2 channel sources. It includes 'DTS Neo: 6 Music' suited for playing music.

DTS 96/24
This is high resolution DTS with a 96 kHz sampling rate and 24 bit resolution, providing superior fidelity. Use it with DVDs bearing the DTS 96/24 logo.

DTS-HD High Resolution Audio
Developed for use with HDTV, including the new video disc formats Blu-ray and HD DVD, this is the latest multi-channel audio format from DTS. It supports up to 7.1 channels with 96 kHz/24 bit sampling rate and signal resolution.

DTS –HD Master Audio
Designed to take full advantage of the additional storage space offered by the new Blu-ray and HD DVD disc formats, this new DTS format offers up to 7.1 discrete channels for uncompressed digital audio with 96 kHz/24 bit sampling rate and signal resolution.

Dolby Digital

Dolby Digital is the multi-channel digital signal format developed by Dolby Laboratories. Discs bearing the Dolby Digital logo include the recording of up to 5.1 channels of digital signals. This will put you right in the middle of the action, just like being in a movie theater or concert hall.

Dolby Digital EX

This mode expands 5.1 channel sources for 6.1/7.1 channel playback. It's especially suited to Dolby Digital EX soundtracks that include a matrix encoded surround back channel. The additional channel adds an extra dimension and provides an enveloping surround sound experience, perfect for rotating and fly-by sound effects.

Dolby Digital Plus

Developed for use with HDTV, including the new video disc formats Blu-ray and HD DVD, this is this latest multichannel audio format form Dolby. It supports up to 7.1 channel with 48 kHz/24 bit sampling rate and signal resolution.

Dolby True HD

Designed to take full advantage of the additional storage space offered by the new Blu-ray and HD DVD disc formats, this new Dolby format offers up to 7.1 discrete channels of lossless audio performance with 96 kHz/24 bit sampling rate and signal resolution.

Dolby Pro Logic IIz

This mode adds front height channels to surround sound, creating a 7.1 channel playback for music, movies and video games. Dolby Pro Logic IIz brings enhanced spatial effects, added depth, and an overall airiness to listening experience

Dolby Pro Logic IIx

This mode expands any 2-channel source for 7.1 channel playback. It provides a very natural and seamless surround sound experience that fully envelopes the listener. As well as music and movies, video games can also benefit from the dramatic spatial effects and vivid imaging. it includes 'Dolby Pro Logic IIx Movie' suited for playing movies, 'Dolby Pro Logic IIx Music' suited for playing music and 'Dolby Pro Logic IIx Game' suited for playing games.

Dolby Pro Logic II

If you are not using any surround back speakers, Dolby Pro Logic II surround will be used instead of Dolby Pro Logic IIx surround. It includes Dolby Pro Logic II Movie, Dolby Pro Logic II Music and Dolby Pro Logic II Game like Dolby Pro Logic IIx surround.

Theater

This mode provides the effect of being in a theater when watching dvd.

Movie

This mode provides the effect of being in a movie theater when watching a movie.

Hall

This mode provides the ambience of a concert hall for classical music sources such as orchestral, chamber music or an instrumental solo.

Game

This mode is suitable for video games.

Stadium

This mode provides the expansive sound field to achieve the true stadium effect when watching sporting events.

Multi Channel Stereo

This mode is designed for playing background music. The front, surround and surround back channels create a stereo image that encompasses the entire area.

F.S.S (Front Stage Surround)

This mode allows you to create natural surround sound effects using just the front and the rear speakers.

A.L.C (Auto Volume Level Control)

This mode automatically equalizes playback sound level if each sound level varies with the music source recorded in a portable audio player.

Modes \ Channels	Front L/R	Center	Surround L/R	Surround Back	Sub woofer
DTS-HD High Resolution Audio/ Master Audio	O	O	O	O	O
DTS, DTS 96/24	O	O	O	-	O
DTS ES Discrete / Matrix	O	O	O	O	O
DTS NEO:6 Cinema/Music	O	O	O	O	-(*)
Dolby Digital Plus/ Dolby True HD	O	O	O	O	O
Dolby Digital	O	O	O	-	O
Dolby Digital EX	O	O	O	O	O
Dolby Pro Logic IIz Height	O	O	O	O	O
Dolby Pro Logic IIx Movie/ Music/Game	O	O	O	O	O
Dolby Pro Logic II Movie/ Music/Game	O	O	O	-	O
(multi) PCM	O	O	O	O	O
Auto Volume Level Control	O	-	-	-	-(*)
Other Surrounds	O	O	O	O	-(*)
Stereo	O	-	-	-	-(*)

Note

- The sound from each channel can be reproduced according to the surround modes as follows:

(*) : Depending on the subwoofer setting, the sound from the subwoofer channel may be reproduced.

- Depending on the speaker setting and the number of the encoded channels,etc., the sound from the corresponding channels cannot be reproduced.

Selecting the Surround mode

Before surround playback, first perform the speaker setup procedure, etc. on the OSD settings for optimum performance.

Select the desired surround mode by pressing the SURROUND U(•) / DOWN(•) buttons.

- Each time the buttons are pressed, the surround mode changes depending on the input signal format as the table below:

Signal format being input	Selectable surround mode
Dolby Digital plus sources	Dolby Digital Plus
Dolby TrueHD sources	
Dolby Digital EX 6.1 channel sources Dolby Digital 5.1 channel sources	<DOLBY DIGITAL EX. DOLBY PLIIx MUSIC>,(DOLBY PLIIx MOVIE), {DOLBY PLIIz}, DOLBY DIGITAL, DSP Surround modes*
Dolby Digital 2 channel sources	<DOLBY PLIIx MOVIE, DOLBY PLIIx MUSIC, DOLBY PLIIx GAME>, [DOLBY PLII MOVIE, DOLBY PLII MUSIC, DOLBY PLII GAME], {DOLBY PLIIz}, DTS NEO: 6 MUSIC, DTS NEO: 6 CINEMA, DSP Surround modes*
DTS-HD High Resolution Audio source	DTS-HD HRA
DTS-HD Master Audio sources	DTS-HD
DTS ES Discrete/Matrix 6.1 channel sources	<Corresponding DTS ES mode, DTS+DOLBY PLIIx MUSIC>,(DTS+DOLBY PLIIx MOVIE), DTS, {DTS+DOLBY PLIIx}, DSP Surround modes*
DTS sources DTS 96/24 sources	Corresponding DTS mode, <DTS NEO: 6, DTS+DOLBY PLIIx MUSIC>,(DTS+ **DOLBY** PLIIx MOVIE), {DTS+DOLBY PLIIz}, DSP Surround modes*
PCM(multi-channel) sources**	MULTIPCM, <MCH+PLIIx MOVIE, MCH+PLIIx MUSIC>, {MCH+PLIIz}, DSP Surround modes*
PCM(2 channel) sources Analog stereo sources	<DOLBY PLIIx MOVIE, DOLBY PLIIx MUSIC, DOLBY PLIIx GAME>, [DOLBY PLII MOVIE, DOLBY PLII MUSIC, DOLBY PLII GAME], DTS NEO: 6 MUSIC, DTS NEO: 6 CINEMA, {DOLBY PLIIx}, DSP Surround modes*

Depending on surround back speaker setting, some surround modes can be selected or not as follows
< > : possible only when surround back speaker is not set to “NO”.
[ ] : possible only when surround back speaker is set to “NO”.
( ) : possible only when surround back speaker is set to “2ch”.
{ } : possible only when front height speaker is set to “ON”.
* : stand for THEATER, MOVIE, HALL, GAME, STADIUM, MCH STEREO, F.S.S, A.L.C.
** : on the signal format being input, the Dolby Pro Logic IIx modes may not be selected.

Note

- When “Center” and “Surround” are set to “NO”, any surround mode cannot be selected and the source can be reproduced in the stereo mode.
- While playing digital signals from Dolby Digital or Dolby TrueHD program source or listening in Dolby Pro Logic II/Dolby Pro Logic IIx Music mode or Dolby Pro-Logic IIz mode, you can adjust their parameters for optimum surround effect.

Cancelling the surround mode for stereo operation

Press the STEREO button.

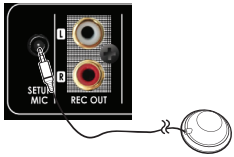
- ◆Depending on the signal format which is being input, either the Stereo Mode or the 2CH down-mix model is selected.

Tone Setting

Bass and Treble controls are available in the Tone Setting menu. These are shelving tone controls, and allow the addition or subtraction of low or high frequency content from the selected audio source.

Automated Speaker Setup

All of the manual room correction described in the previous section can be accomplished through an automated process, within the on-screen display, or the URC Accelerator Application. Included with each DMS-AV is a setup microphone, which when connected to the DMS-AV Setup Mic input, can be used to perform an automated room correction routine. The internal DSP of the DMS-AV shall execute a series of test tones to each speaker in the installation, which will then automatically determine each speaker level, correct speaker distance setting and crossover frequency. These settings will be automatically saved within the DMS-AV firmware, and URC Accelerator, if applicable.



The Set up Microphone included should be the only microphone used in the automatic setup configuration.

Input Settings

Each of the 12 inputs on the DMS-AV supports parameters that allow for customization for each input and their function.

Input Rename

Each input may be renamed to better de scribe its function. The maximum amount of characters that can be used to rename an input is eight. The input name can be set in the DMS-AV on-screen display, or within the URC Acceler ator Application.

Digital Audio Assign

(Available for all inputs except Phono) – Each input may have their audio input reassigned to any of the two optical digital or coaxial digital (S/PDIF) inputs. The two optical digital inputs are named **IN A** and **IN B**, and the two coaxial digital inputs are named **IN C** and **IN D**. Digital audio assign options may also be used to reassign HDMI audio, in the case that a DVI input is used, requiring the use of a separate audio input.

Analog Audio Assign

(Available for HDMI inputs only) - Analog audio assign options may also be used to reassign HDMI audio to any of the line level analog audio inputs (**IN 1**through **IN 6**).

Video Scaling

This allows setting of a desired output resolution per input selected by the DMS-AV. All inputs, except phono, support a discrete video output resolution mode. Also available is an "HDMI Bypass" mode, which is essentially a mode that transfers the native resolution of the selected source to the display monitor or projector, via the DMS-AV's HDMI output.

A/V Sync

This setting allows correction for the native Lip-Sync A/V delay of the connected video monitor, and the selected source. One video frame is approximately 17 mS delay. A/V Sync allows for up to 200 mS of A/V Sync correction. Modern HD monitors may have up to 5 frames of perceivable delay.

DC Trigger 1

This setting allows DC Trigger 1 to be set to trigger a 12V DC signal from DC Trigger 1 when a specific input is selected.

DC Trigger 2

This setting allows DC Trigger 2 to be set to trigger a 12V DC signal from DC Trigger 2 when a specific input is selected.

Linking Audio Zones with the DMS-AV

The DMS-AV has the ability to create multicast audio streams for two analog audio inputs. These streams can then be sent to URC DMS multi zone amplifiers for the purpose of creating secondary audio zones with sources that are connected to the DMS-AV. Please contact your URC representative for more information regarding sharing analog sources with other URC DMS multi zone amplifiers.

Accessing Streaming Audio Sources with the DMS-AV

The DMS-AV has the ability to receive multicast audio streams from URC DMS multi zone amplifiers and SNP units in a Total Control project. Up to 32 audio multicast streaming sources can be selected by the DMS-AV. Please contact your URC representative for more information regarding accessing multicast sources from other URC DMS multi zone amplifiers.

Updating DMS-AV Firmware

The DMS-AV firmware can be updated via the URC Accelerator Application. Contact your URC representative about available firmware updates for the DMS-AV.

DMS-AV Specifications

General Information

Video Scaler: ABT 2015 with Graphic OSD
Network Control & Music streaming (with URC DMS Amplifiers)
TI Room EQ
HD Audio 7.2ch/HDMI (3D, ARC)
12V DC Trigger Out: 2 (assignable)
Standby Power Management: Under 0.5W
CE Lot 6 / Energy Star version 2
Power Supply: AC 230V 50Hz
AC Cord Type: Detachable

Power Amplifier

Type: Analog Discrete 7 channel Power Output: 125 Watts per channel (20~20kHz/8 ohms/0.05%)
Power Transformer: E type
Wide Range Amplifier Stage: Yes (10~100kHz)

DSP Processing

Processor: TI DA 788
D/A Converter: 192KHz / 24Bit for All channels
Auto Speaker Setup: Yes
Room EQ: TI
Decoding/Surround DTS-HD MA / HRA: Yes
- DTS ES: Yes
- DTS: Yes
- DTS 96/24: Yes
- DTS Neo:6: Yes
- Dolby TrueHD / Digital Plus: Yes
- Dolby Digital EX: Yes
- Dolby Digital: Yes
- Dolby ProLogic IIx: Yes
- Dolby ProLogic IIz: Yes
- Surround Format Auto Detection: Yes

AV Sync: Yes (more than 150 ms)
User-selectable Crossover: 40~250Hz

Video Processing

Processor: ABT 2015
Video Conversion Analog to HDMI: Yes
Video Scaling: HDMI to HDMI: 1080p maximum
Analog to HDMI: 1080p maximum
Video Capability: 1080p 60Hz, 1080p 24Hz with full on-screen display
HDMI (3D/ARC/CEC)

Video Input/Output

Component Video Inputs: 2
Component Video Output: 1
Composite Video Inputs: 4
HDMI A/V Inputs: 5
HDMI A/V Output: 1

General Audio Features

Preamplifier Outputs: Front / Center / Surround / Surround Back / Front Height Subwoofer (2)

Speaker Outputs: Front / Center / Surround / Surround Back / Front Height (assignable)

AMP Assign for Multi-Speaker: Yes
Speaker Output Terminals: Binding Post
Digital Audio Inputs: 2 Optical S/PDIF, 2 Coaxial S/PDIF
Analog Audio Inputs: 6 Line Level Inputs, 1 Phono Level Input

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OCE-0119B Rev 01